

## Claims

1. A method for compressing a sequence of data elements, in particular image data, wherein the data elements are stored in a compressed or uncompressed form depending on the correlation with the data elements preceding or following the data element in the sequence, wherein at least one additional data element is provided in which is stored the information as to whether the stored data elements are stored in a compressed or uncompressed form.

2. The method according to claim 1, characterized in that the sequence of data elements is processed in a predeterminable order, in which successive elements are checked as to whether they are identical.

3. The method according to one of the preceding claims, characterized in that a compression of the data elements occurs in such a way that data elements which occur several times in succession are counted and are stored with a repetition factor.

4. The method according to one of the preceding claims, characterized in that the at least partially compressed sequence of data is stored in at least one memory (34).

5. The method according to claim 4, characterized in that the data element in which is stored information as to which data elements are stored in a compressed or uncompressed form is stored in a first storage region (11, 110) and that the compressed or uncompressed data elements are stored in a second storage region (12, 120).

6. The method according to one of the preceding claims, characterized in that in sequences of data elements which exceed a predeterminable number of data elements, the sequence is stored in a number of data packets (10, 100), wherein each data packet is comprised of at least two data elements.

7. A method for decompressing a sequence of data elements, in particular image data, from a data packet (10, 100), which is comprised of data elements in a first region (11, 110) and a second region (12, 120) of the data packet, wherein the sequence of data elements is generated as a function of the data elements stored in the first region, from the data elements stored in the second region, with or without a decompression.

8. The decompression method according to claim 7, characterized in that the data elements in the first region are comprised of base elements (15) and the data elements and base elements are processed in a predetermined sequence in that each base element of the data elements stored in the first region is respectively associated with two data elements (16, 17, 18) stored in the second region; if a base element has a first value, a decompression of the data elements does not occur, and if the base element has a second value, a decompression does occur.

9. The decompression method according to one of claims 7 and 8, characterized in that depending on the data elements present in the second region of the data packet (10, 100) and the first base element of a predetermined partial sequence to be processed according to the predetermined order, in particular an empty partial sequence, data elements are added and in that the partial sequence thus generated is continued with each additional base element to be processed, as a function of the data elements present in the second region of the data packet, until an termination criterion is fulfilled.

10. The decompression method according to claim 9, characterized in that for the case in which no decompression occurs, data elements are added to the partial sequence unchanged.

11. The decompression method according to one of claims 9 and 10, characterized in that a decompression occurs in such a way that a first, predetermined data element associated with the base element is established as a repetition factor for a second;

predetermined data element associated with the base element and the second data element is added to the partial sequence in accordance with the repetition factor.

5 12. The decompression method according to one claims 7 – 11, characterized in that a decompression is executed on a data sequence comprised of a number of concatenated or successive data packets.

10 13. The decompression method according to one claims 7 – 11, characterized in that the device is connected to a calculating unit (31) and a display device (33), and that depending on information transmitted by the calculating unit (31), at least partially compressed sequences of data elements are decompressed and the consequently generated image data can be transmitted to the display device (33), preferably via an image memory (32).

15 14. The decompression method according to claim 13, characterized in that the device is for decompressing part of a freely programmable combination instrument.